

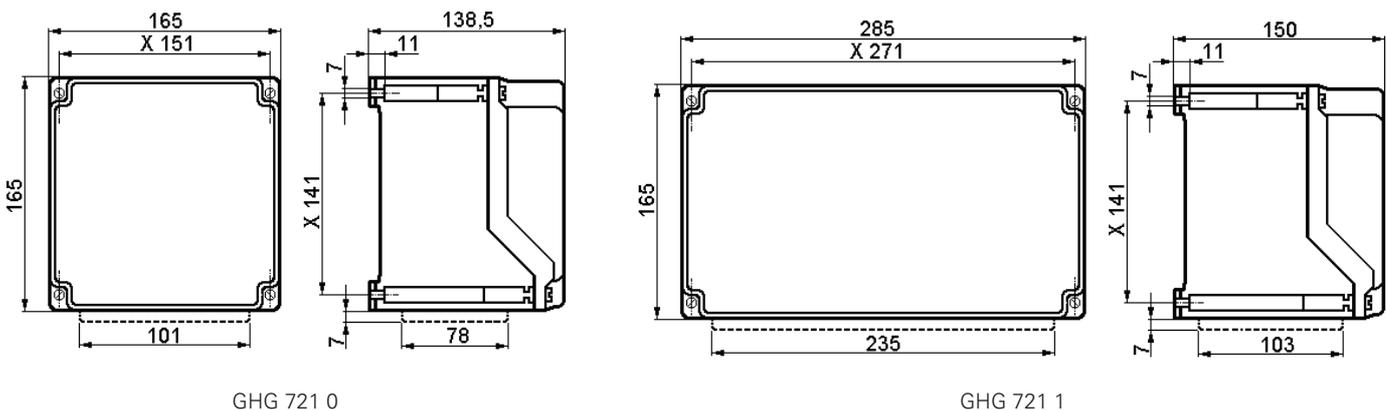
Terminal box GHG 721 1...



1 Technical data

1.1 Plastic terminal boxes GHG 721 ...

ATEX type examination certificate	BVS 13 ATEX E 013 X
Marking acc. to 94/9/EG and standard ATEX	Ⓜ II 2 G Ex (d e mb) IIC T5* -55°C ≤ T _{amb} ≤ +55°C Gb Ⓜ II 2 G Ex (d e mb) IIC T6* -55°C ≤ T _{amb} ≤ +40°C Gb Ⓜ II 2 G Ex e ib [ia/ib] IIC T5* -55°C ≤ T _{amb} ≤ +55°C Gb Ⓜ II 2 G Ex e ib [ia/ib] IIC T6* -55°C ≤ T _{amb} ≤ +40°C Gb Ⓜ II 2 D Ex tb IIIC T80°C (T95°C) Db IP66 *(Depending on the components installed)
IECEX type examination certificate	IECEX BVS 13.0031X
Category of application IECEX	Ex (d e mb) IIC T5* -55°C ≤ T _{amb} ≤ +55°C Gb Ex (d e mb) IIC T6* -55°C ≤ T _{amb} ≤ +40°C Gb Ex e ib [ia/ib] IIC T5* -55°C ≤ T _{amb} ≤ +55°C Gb Ex e ib [ia/ib] IIC T6* -55°C ≤ T _{amb} ≤ +40°C Gb Ex tb IIIC T80°C (T95°C) Db IP66 *(Depending on the components installed)
Rated voltage	up to 690 V
Rated current	acc. to table on the inside of the enclosure cover
Permissible ambient temperature	-55°C to +40°C/+55°C (catalogue version)
Deviating temperatures possible with special versions	
Perm. storage temperature in original packing	-55°C to +55°C
Protection category acc. to EN/IEC 60529	IP 66 (catalogue version)
Insulation class acc. to EN/IEC 61140	I - plastic terminal boxes fulfil this requirement II - with metal flange
Terminals	
Terminal box GHG 721 0...	max. 16 mm ²
Terminal box GHG 721 1...	max. 35 mm ²
Cable entries	acc. to customer's specification and as certified
Empty weights	
Terminal box GHG 721 0...	approx. 1.1 kg
Terminal box GHG 721 1...	approx. 1.7 kg
Test torques	
Cover screws	2.50 Nm
Cap nut of the plastic cable entry M12	1.65 Nm
Cap nut of the plastic cable entry M16 - M20	2.50 Nm
Cap nut of the plastic cable entry M25	3.50 Nm
Cap nut of the plastic cable entry M32 - M 63	5.00 Nm

 Dimensions, plastic terminal boxes
 X = fixing dimensions


2 Safety instructions



The operations must be carried out by electrical suitably trained in hazardous area with knowledge of increased safety explosion protection IEC/EN 60079-14.

The terminal boxes GHG 72. are not suitable for Zone 0 and Zone 20 hazardous areas.

The requirements of the IEC/EN 60079-31 regarding excessive dust deposits and temperature to be considered from the user.

The temperature class and explosion group marked on the terminal boxes have to be observed.

Modifications to the terminal boxes or changes of their design are not permitted.

They shall to be used for their intended purpose and in perfect and clean condition.

Prior to taking the terminal boxes into operation, they shall be checked in accordance with the instruction as per section 6.

Observe the national safety rules and regulations for prevention of accidents as well as the safety instructions included in these operating instructions and set in italics the same as this text!

2.1 Legend

Safety warning

Note

3 Conformity with standards

It has been designed, manufactured and tested according to the state of the art and to DIN EN ISO 9001:2008 and IEC 80079-34:2011.

The apparatus is conform to the standards specified in the EC-Declaration of conformity, enclosed separately.

4 Field of application

The plastic terminal boxes are suitable for use in Zone 1, 2 and 21, 22 hazardous areas acc. to IEC/EN 60079-10-1 and IEC/EN 60079-10-2.

The enclosure materials employed, including the exterior metal parts, are made of high-quality materials which ensure a corrosion protection and resistance to chemical substances corresponding to the requirements in a "normal industrial atmosphere":

- glass-fibre reinforced polyester
- special stainless steel V4 A AISI 316 L.

In case of use in an extremely aggressive atmosphere, please refer to manufacturer.

5 Use / Properties

The terminal boxes are intended for the distribution of electrical energy, e.g. light circuits, heating circuits, control circuits, intrinsically safe circuits etc..

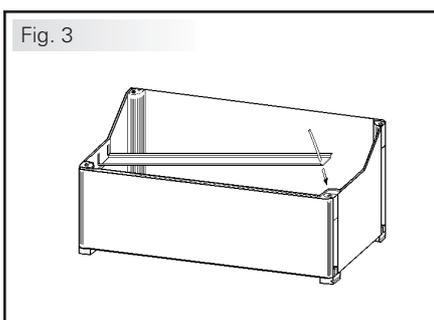
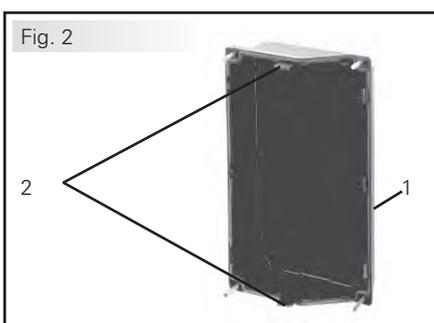
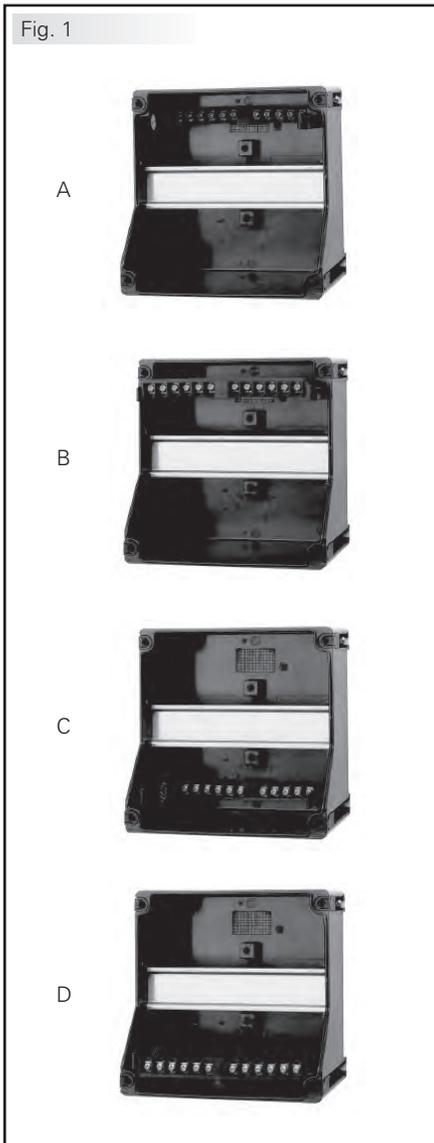
As to temperature class, explosion group, permissible ambient temperature, see technical data.

The terminal boxes can also be used in a „normal industrial area“

⚠ The data as per point 3 and 4 shall be taken into account with the use.

⚠ Applications other than described are not permitted without CEAG / CCH's prior written consent. For the operation, the instructions stated in section 7 of the operating instructions shall be observed.

⚠ The user alone is responsible for the appropriate use of this installation switch in consideration of the basic conditions existing at the plant (see technical data).



6 Installation

For the mounting and operation, the respective national regulations as well as the general rules of engineering shall be observed (IEC/EN 60079-14).

6.1 Mounting

The plastic boxes can be mounted without opening their enclosure.

When mounting the terminal boxes directly onto the wall, they shall rest evenly only on the fastening points provided for them. The chosen screw must match the fastening hole (see dimensional drawings page 8) and they shall not damage the hole (e.g. use of a washer).

The terminal boxes must be fastened diagonally by means of at least 2 screws.

⚠ If the screws are overtightened, the plastic terminal boxes may be damaged.

The plastic terminal boxes GHG 721 0 and GHG 721 0 are suitable for fastening onto CEAG / CCH apparatus holders by means of self-cutting screws and clip-on mounting (see fig. 4- 7, page 11 + 12).

⚠ The respective mounting instructions will have to be observed.

6.2 Opening the apparatus/ Electrical connection

⚠ The electrical connection of the apparatus may only be carried out by skilled staff (IEC/EN 60079-14).

⚠ The minimum clearances and creepage distances in accordance with EN/IEC 60079-7, Table 1, shall be observed.

The table indicating the current load values which is provided on the cover inside of the terminal boxes is to be observed.

In order to maintain the mode of protection, the conductors will have to be connected with special care.

⚠ The insulation shall reach up to the terminal. The conductor itself shall not be damaged.

The connectible min. and max. conductor cross-sections will have to be observed.

All screws and/or nuts of the supply terminals, and unused terminals, shall be tightened down.

The fitted standard terminals are designed for direct connection of conductors with copper cores.

If stud terminals are fitted, DIN cable lugs shall be used.

⚠ The cable lugs should be crimped onto the cable in a workmanlike manner. It is to be ensured that the required min. air gaps are kept (at 690V ->12mm).

⚠ In case of mixed equipment Ex e / Ex-i, the required minimum distances will have to be kept (see e.g. IEC/EN 60079-11).

After removing the terminal rail (in order to facilitate the entry of cables), the terminal rail shall again be properly put in place before establishing the electrical connection.

Removal and mounting of the terminal rail are performed as follows:

By pressing apart the enclosure sides, the terminal rail can be detached from the bottom part of the enclosure.

In order to install the terminal rail, it is fitted onto the catch on one side of the enclosure wall and then snapped in on the opposite enclosure wall (see fig. 3).

The PE rail can optionally be fitted in 4 positions (see fig.1):

- A Enclosure top side - PE-connection bottom
- B Enclosure top side - PE-connection top
- C Enclosure bottom side - PE-connection bottom
- D Enclosure bottom side - PE-connection top

The PE rail is fitted as follows: It has to be pushed home in the respective guide rails that are integrated into the lateral enclosure walls.

⚠ Care has to be taken that the PE rail has such a position that a proper conductor connection is ensured.

⚠ In the case of building up the electrical equipment in the "protective insulation" version, appropriate sticker GHG 905 1002 P0005 can be requested by the manufacturer.

⚠ If the inserted terminal rail is not equipped completely with line-up terminals, the terminal rail must be included in the equipotential earth connection also.

6.3 Cable entries (KLE)/ Blanking plugs

⚠ *Generally, only certified cable entries and blanking plugs may be used. Flexible cables are to be used with trumpet-shaped cable glands or other suitable entries with additional pull-relief. The mounting directives applicable to the fitted cable entries are to be observed.*

When using cable entries with a lower IP protection than that which applies to the device (see technical data) the IP protection of the whole device will be reduced.

In order to establish the minimum protection category, unused holes have to be closed with a certified blanking plug.

Care has to be taken that when fitting the cable entries, sealing inserts appropriate to the cable diameter are used.

In case of sealing inserts that are cut out, it will have to be ensured that the insert is properly adapted to the cable diameter.

All vacant metric CEAG / CCH cable entries are to be closed with the certified blanking plug for metric cable entries.

In order to ensure the required minimum protection category, the cable glands shall be tightened down.

⚠ **Overtightening might impair the protection category.**

⚠ **Attention: When tightening the cap nut of the type ADE 1F metal cable entry, the screwing is to be protected against twisting by means of a suitable tool.**

6.4 Flange and metal plates

If flange plates have to be removed in case of plastic terminal boxes (e.g. for drilling entry holes), attention will have to be paid to the proper fit of the flange plate and of the clamp clip when mounting them in order to maintain the minimum protection category.

Flange plates for stainless steel terminal boxes shall be fitted so that the IP protection is maintained. Pay attention to the proper seat of the sealing element.

⚠ **PE conductors fed from outside are to be connected to the PE terminal provided on the flange. The maximum cross-section is 50mm².**

⚠ **Attention: Metal flanges, metal plates and metal cable glands shall be included in the equip potential earth connection.**

⚠ **If terminal boxes with plastic flanges are used within the scope of the type examination certificate in ambient temperatures below -40°C, they shall be installed in such a way that they are protected against inadmissible mechanical loads.**

6.5 Closing the device/ cover closure

⚠ **Any foreign matter is to be removed from the apparatus.**

In order to ensure the required minimum protection category, the cover screws are to be tightened down.

⚠ **Overtightening might impair the protection category.**

6.6 Taking into operation

Prior to taking the apparatus into operation, the tests specified in the relevant national regulations will have to be carried out. Apart from that, the correct functioning and installation of the apparatus in accordance with these operating instructions and other applicable regulations will have to be checked.

⚠ **Incorrect installation and use of the terminal boxes can invalidate the guarantee.**

Fig. 4
Apparatus holder size 2A for pipe mounting

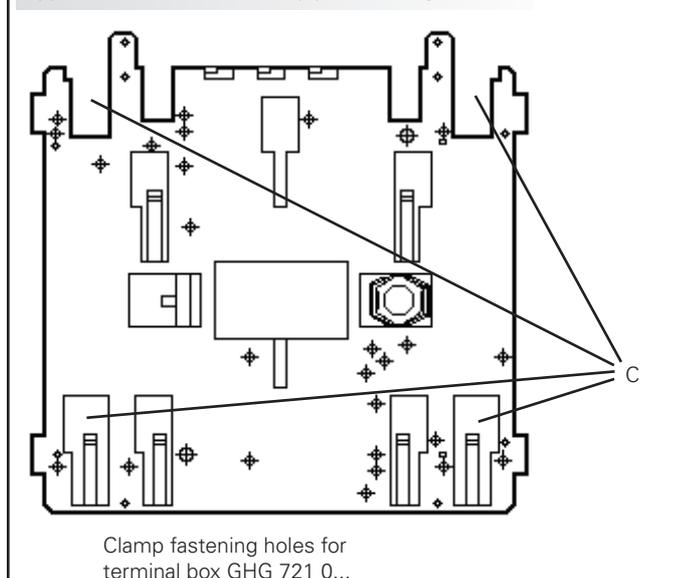


Fig. 5
Apparatus holder size 2A for channel- and wall mounting

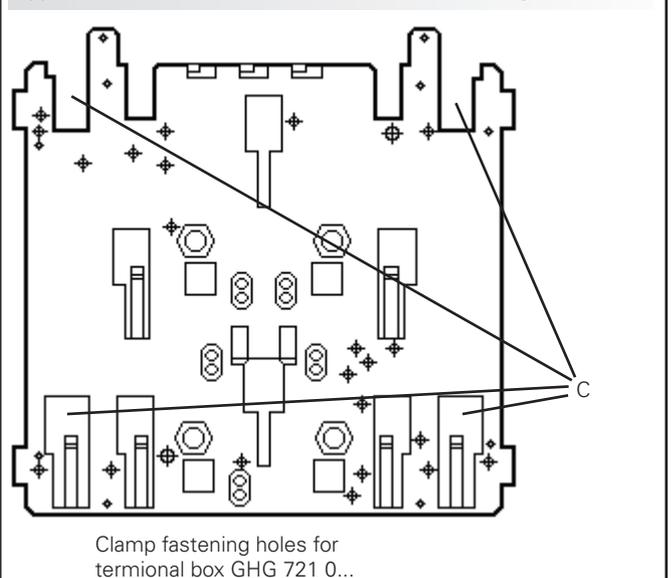
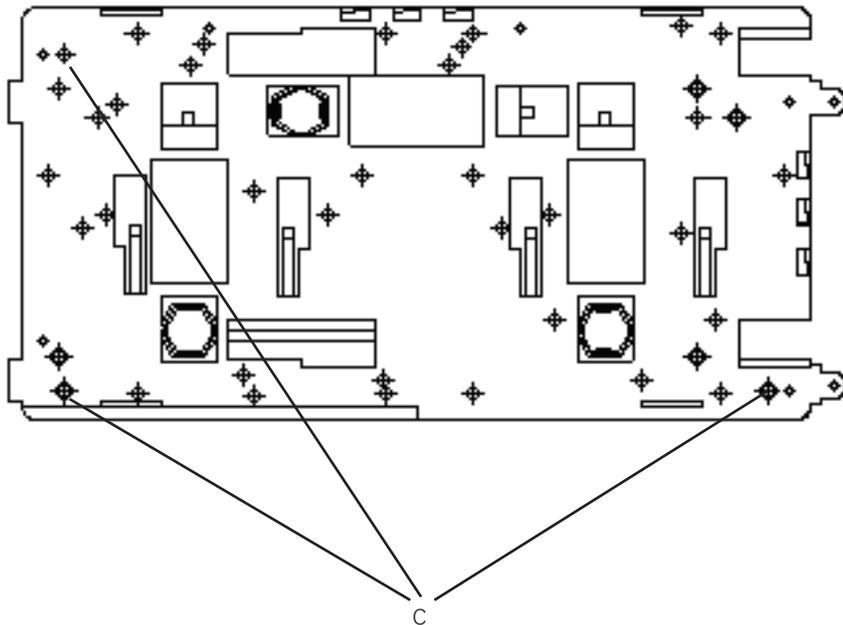
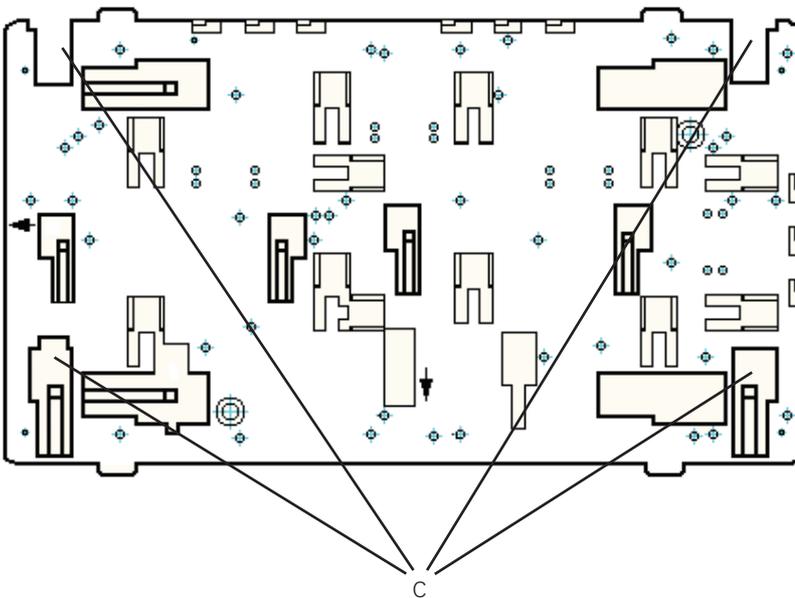


Fig. 6
Apparatus holder, size 3 for pipe mounting, horizontally



Screwed fastening holes for terminal boxes GHG 721 1....

Fig. 7
Apparatus holder, size 3 for channel- and wall mounting, horizontally



Clamp fastening holes for terminal boxes GHG 721 1....

7 Maintenance / Servicing

⚠ The relevant national regulations which apply to the maintenance/repair of electrical apparatus in explosive atmospheres, will have to be observed (IEC/EN 60079-17).

Before opening the enclosure make sure that the terminal box is disconnected from the voltage, or take the appropriate protective measures.

In case of intrinsically safe circuits, working is permitted while voltage applies.

The required maintenance intervals depend on the specific application and will therefore have to be determined by the user dependent on the conditions of use.

When servicing the apparatus, particularly those parts that are decisive for the type of protection against explosion, will have to be checked (e.g. intactness and tightness of the enclosure, efficacy of the gaskets and the cable entries).

Before closing the enclosure cover, pay attention to the correct position and intactness of the holding-down clamps (see fig. 2, page 10).

! Grey or painted plastic terminal boxes shall only be cleaned with a damp cloth.

If during servicing, repairs prove to be necessary, section 8 of these operating instructions will have to be observed.

8 Repairs / Overhaul / Modifications

Overhaul and repairs may only be carried out with genuine CEAG / CCH spare parts.

⚠ Repairs that affect the explosion protection, may only be carried out by CEAG / CCH or a qualified electrician in compliance with the applicable national rules (IEC/EN 60079-19).

Modifications to the apparatus or changes of its design are not permitted, except for the mounting of additional cable entries and the installation of supply terminals in accordance with the approval of the apparatus.

9 Disposal / Recycling

When the apparatus is disposed of, the respective national regulations on waste disposal will have to be observed. In order to facilitate the recycling of individual components, plastic parts are provided with the identification mark of the plastic material used.

Subject to modifications or supplement of the product range.